

Planting Water*: Combining animals and trees to combat climate change *Ernst Gotsch

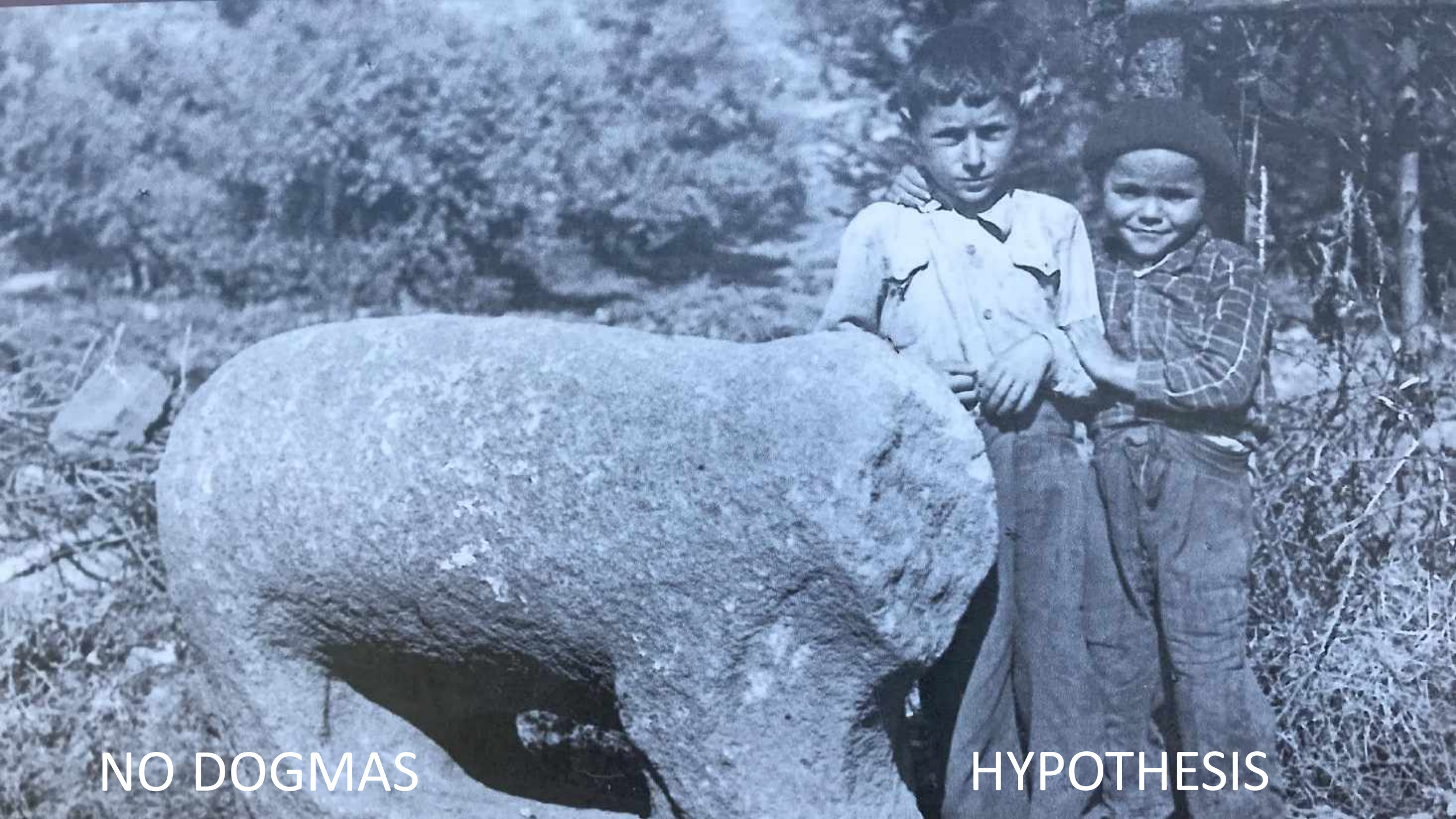


Montado do Freixo do Meio

Portugal

Wath?
Why?



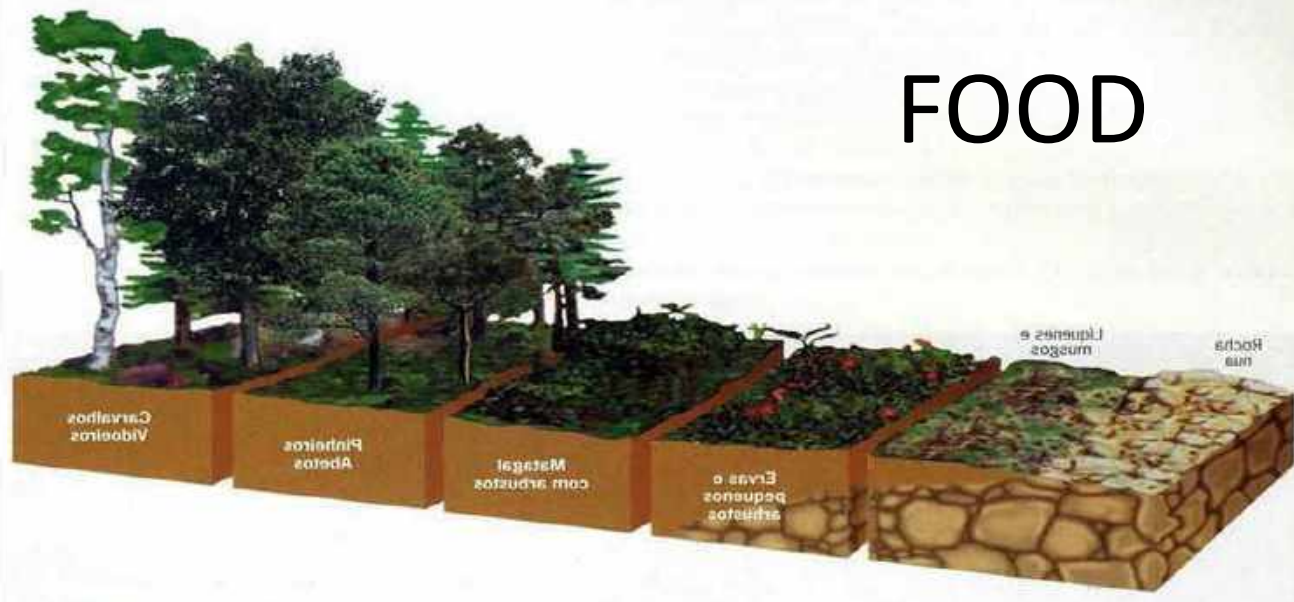


NO DOGMAS

HYPOTHESIS

HUMAN POPULATION GROWTH CHART

(including projections)



FOOD

I THINK I CAN...
I THINK I CAN...
I HOPE I CAN...
I REALLY HOPE I CAN...
MAN, I HOPE I CAN...



15
12.5
10
7.5
5
2.5
0

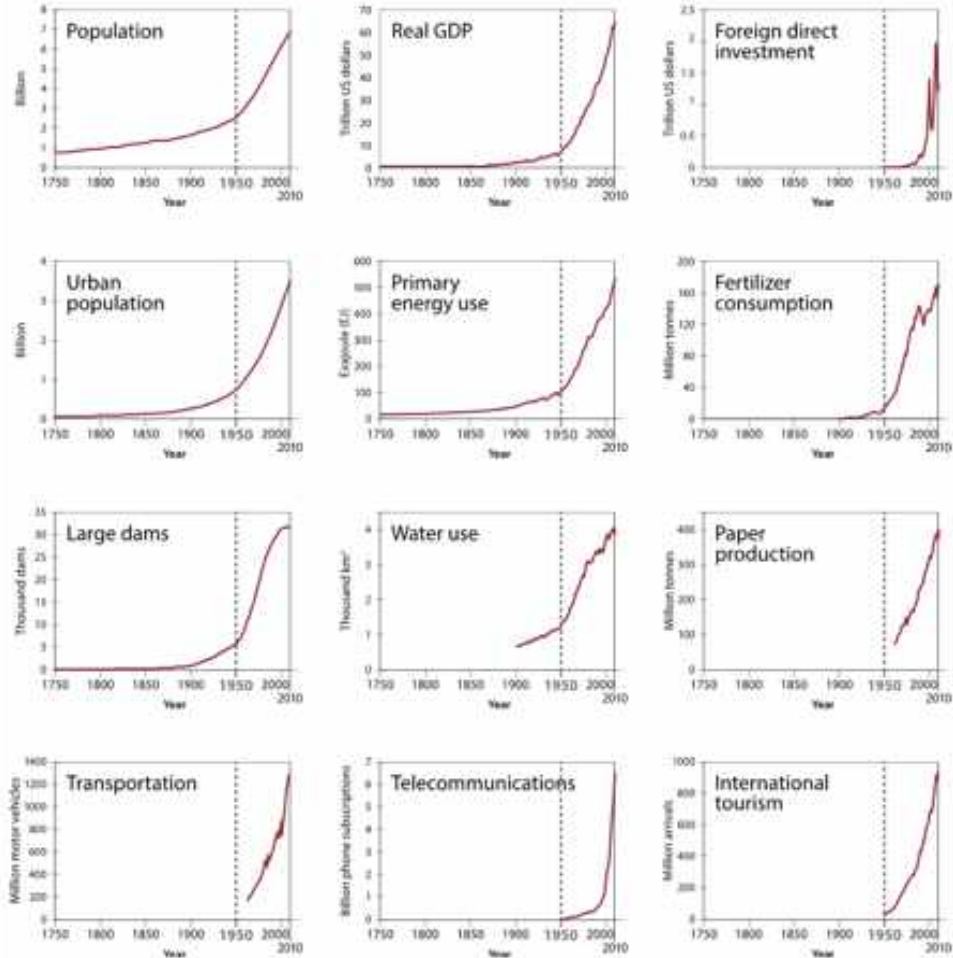
1994 →

YEAR
1 AD 200 400 600 800 1000 1200 1400 1600 1700 1800 1900 2000

The Human Enterprise

- **Population**
- **Economic Growth**
- **Freshwater use**
- **Energy use**
- **Urbanization**
- **Globalization**
- **Transport**
- **Communication**

Socio-economic trends



Steffen et al. 2015



?







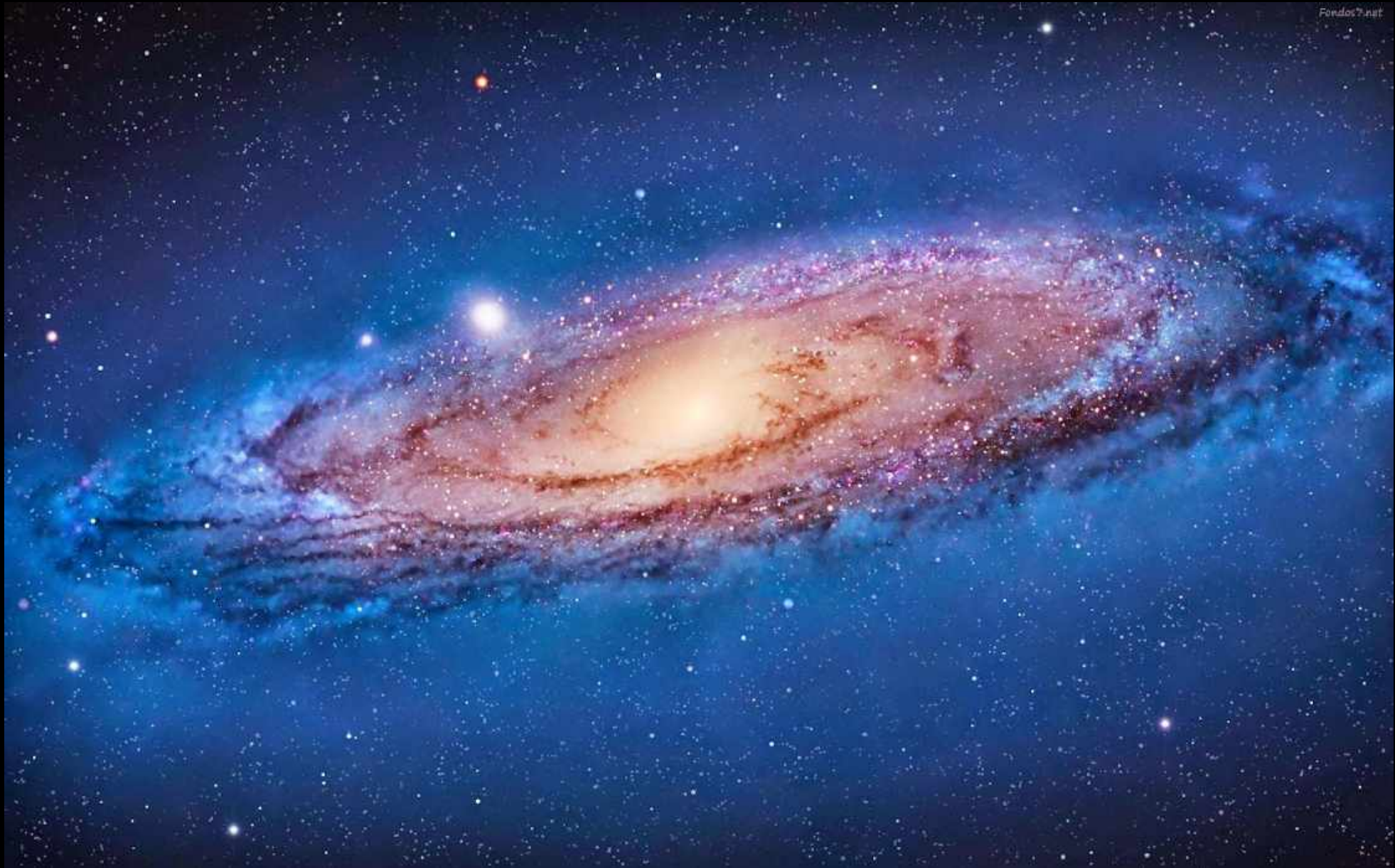
How?

History

Science

Docta Ignorantia

Intuition

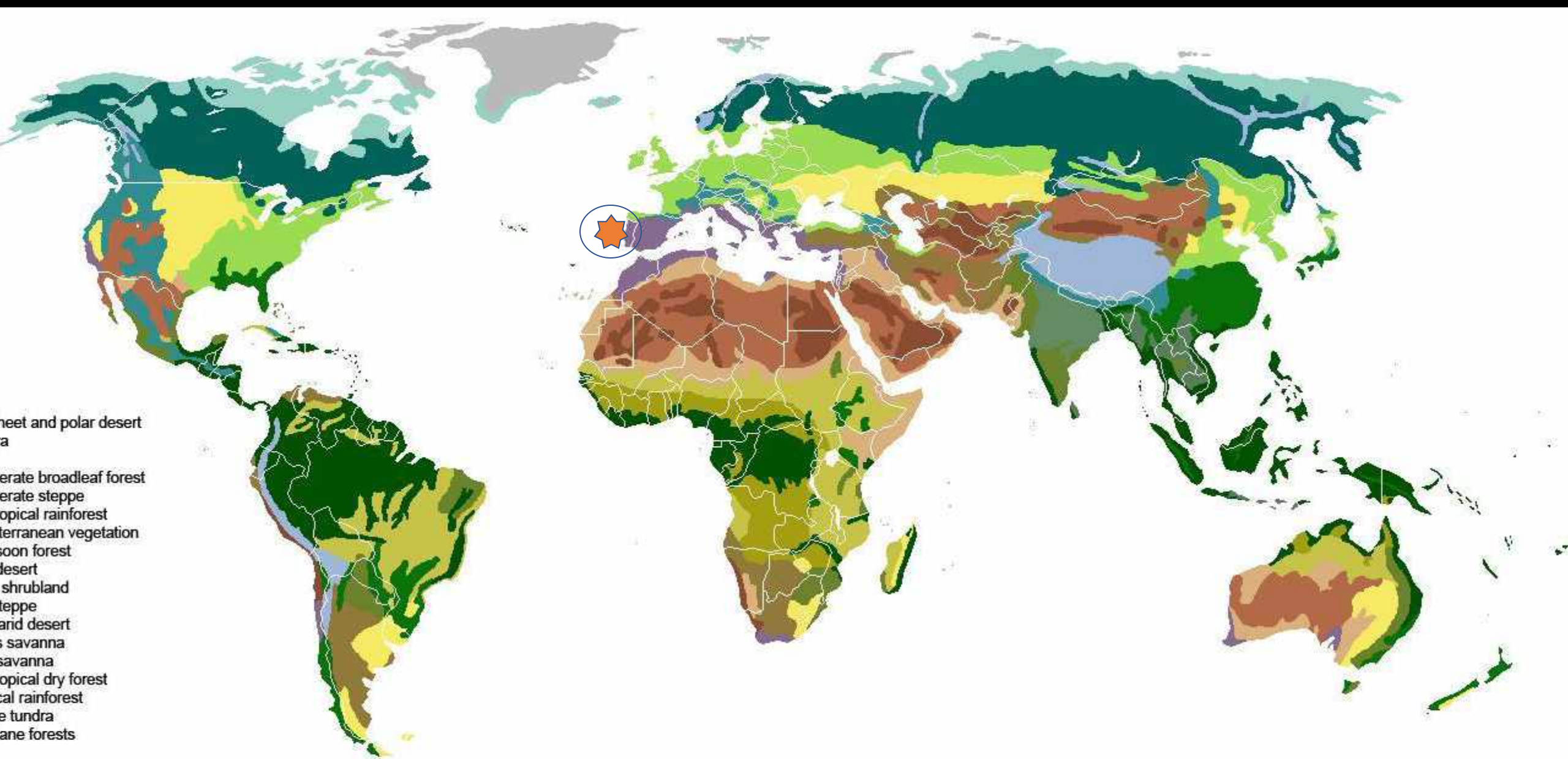




GAIA

Our planet is a single system - the Earth System



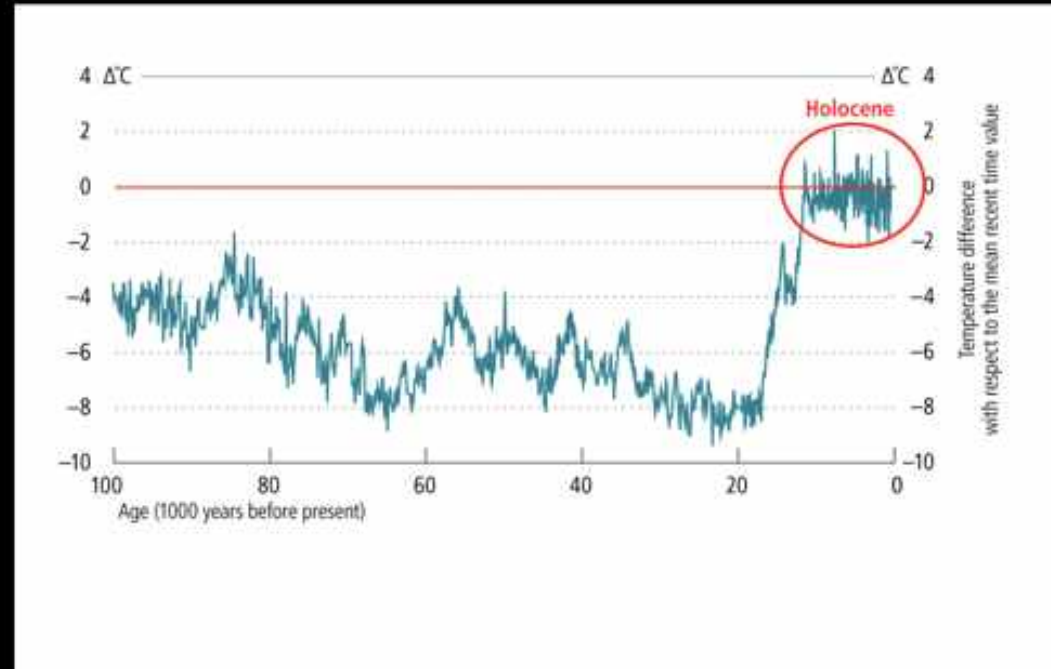


- tundra
- boreal forest
- temperate deciduous forest
- temperate steppe
- tropical rainforest
- Mediterranean vegetation
- monsoon forest
- desert
- shrubland
- steppe
- arid desert
- savanna
- savanna
- tropical dry forest

The main biomes in the world.

 Montado Freixo do Meio

Human Development and Earth System Dynamics



Source: J. Rockström and N. Nakicenovic
Data from Petit et al. 1999 and Oppenheimer 2004



Escoural cave 25 km



Pedra alta Freixo do Meio

Figura 1: ilustração de civilização primitiva.



Fonte: <http://mais-historia.webnode.com/pre-historia/> (2016)





X – XV Century

Montado

Montado?



Montado is an agro-floresty-pastural productive system, resulting from a continuous action of the man over the Iberic natural system in order to overcome climatic variability and social changes

Montado combines different productive activities over the same space, using the high biological and cultural richness that is enhanced by the climatic variability

Montado as
optimal conditions Providing for soil
and water conservation and carbon
trapping

Montado is one of the European
systems that runs better the
production efficiency versus
biodiversity challenge.

BASED:

Cooperation / Symbiosis

Eco-funcionalidad

Risk management



Montado = Eco-efficiency



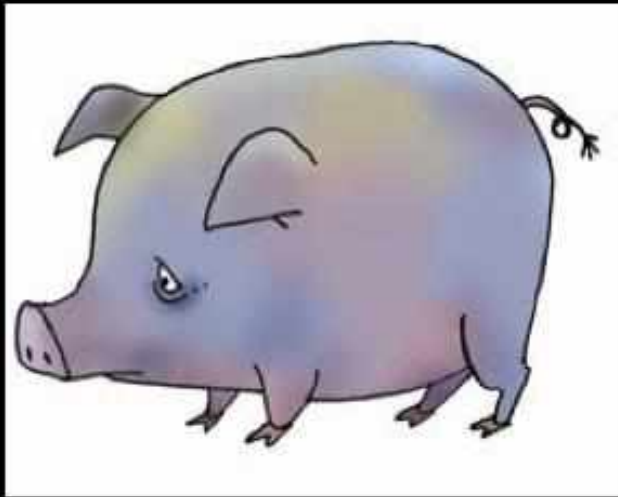


- An uprising of man action over this system, resulting from non adapted politics and farm income decline,
- overgrazing and monoculture, which under climatic variability led to soil degradation

Fragility of Montado



Terrestrial vertebrate biomass



Domesticated animals
ca 65%



Humans
ca 32%



Vertebrate
wildlife
< 3%

The Anthropocene chicken

J. Zalasewicz 2015



1957

905 g



1978

1,808 g



2005

4,202 g



25 APRIL 1974

FLOWER REVOLUTION

PORTUGAL





TASTE
PORTUGAL
HUNTERS











































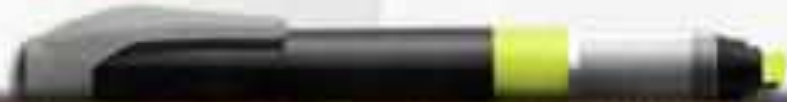
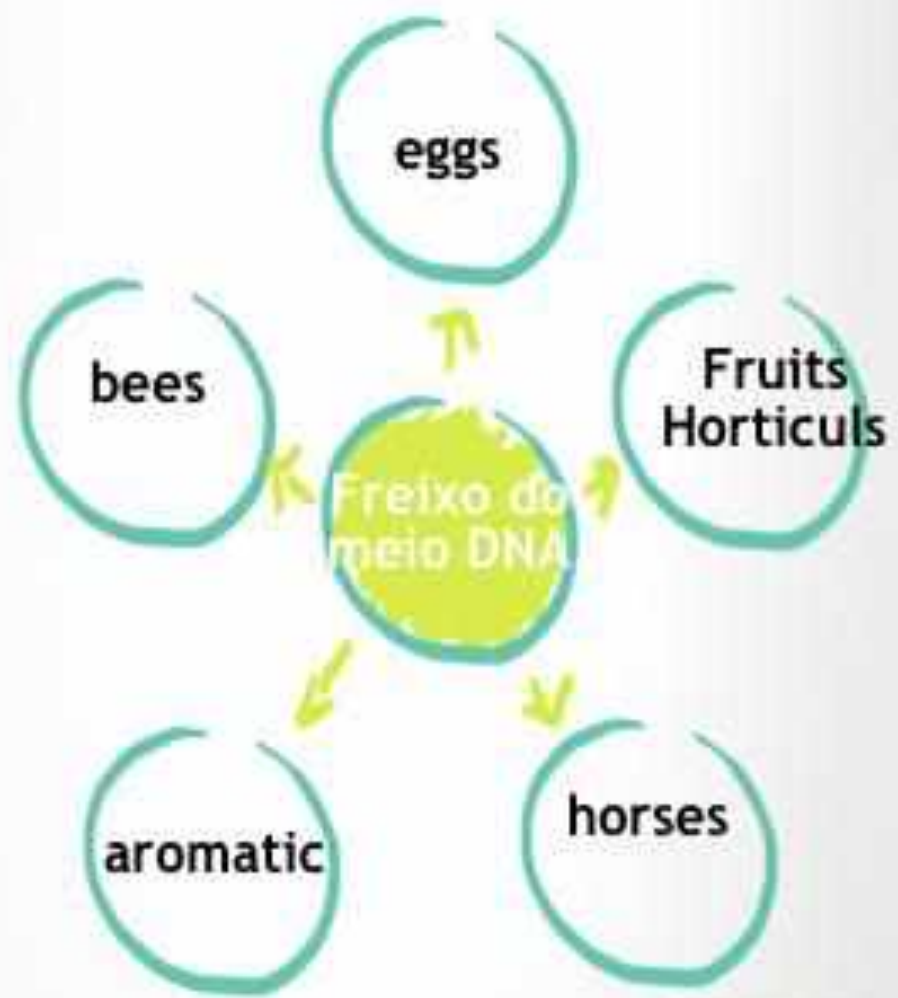


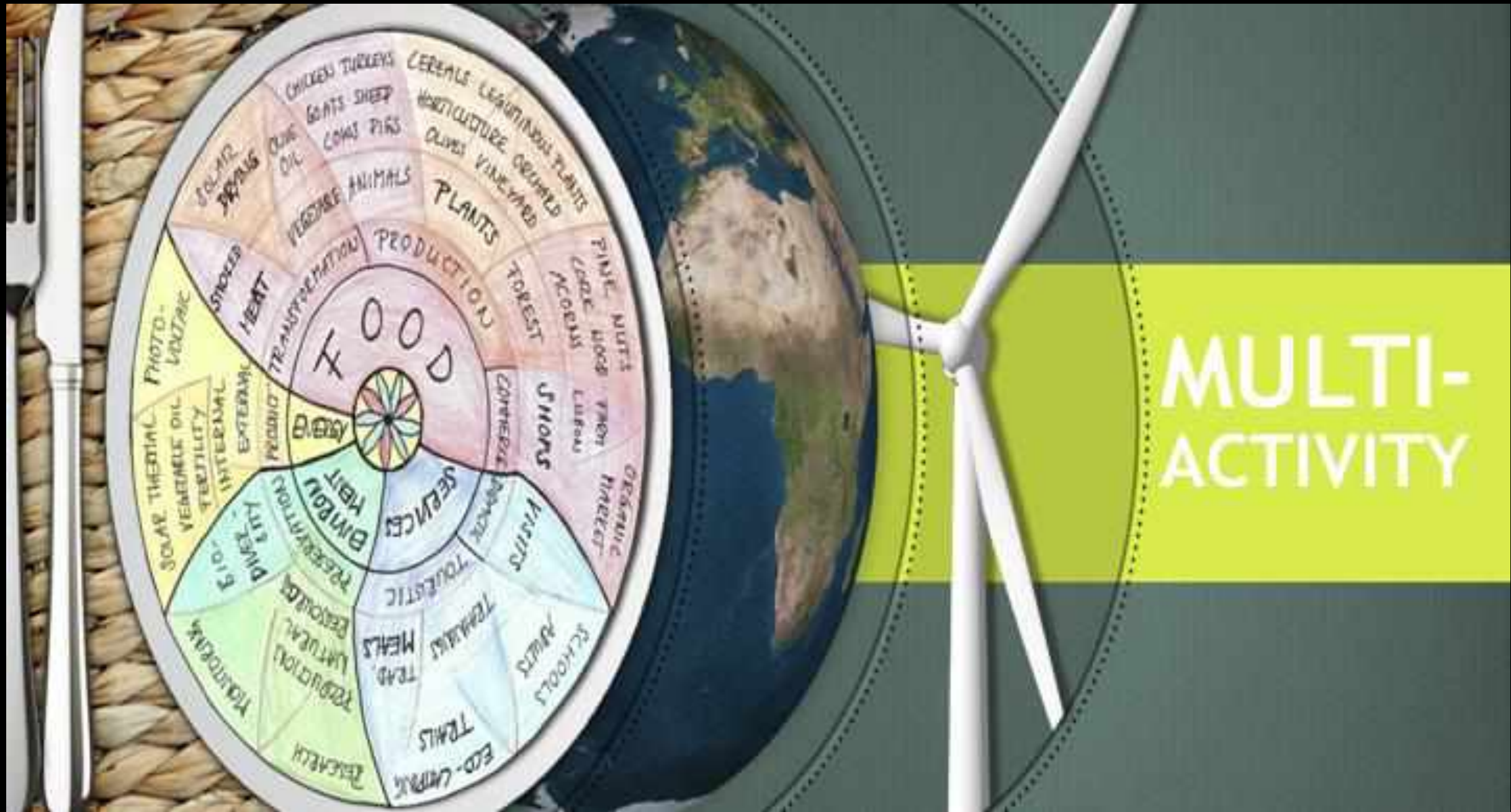












MULTI- ACTIVITY

Freixo Functions

Farm
production

Processing

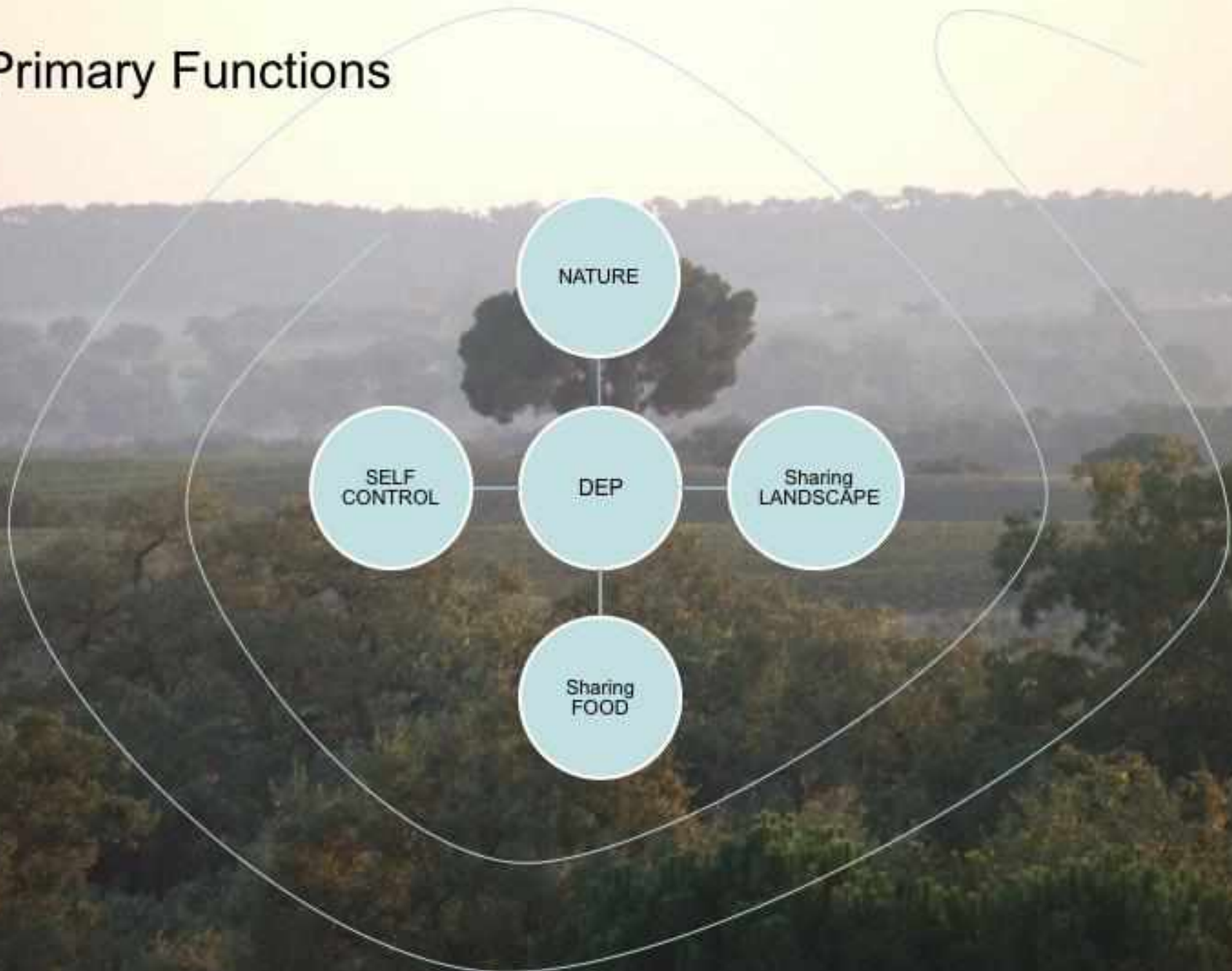
Hole sail

Retail sail

Turistic/
didactical
activities



Primary Functions











Merchade do
Freixo do Meio
Agricultura Biológica
desde 1997



**Loja do Produtor
Organic Take Away**

CSA-Partilhar as Colheitas

Terça-feira a Sábado das 10h as 20h
Mercado da Ribeira-Cais do Sodre-Lisboa



 <p>SEM PESTICIDAS SEM HERBICIDAS SEM FUNGICIDAS</p> <p>SEM PESTICIDAS SEM HERBICIDAS SEM FUNGICIDAS</p>	 <p>SEM ANTIBIÓTICOS SEM CORANTES SEM CONSERVANTES</p> <p>SEM ANTIBIÓTICOS SEM CORANTES SEM CONSERVANTES</p>	 <p>RECEITAS TRADICIONAIS INGREDIENTES BIOLÓGICOS</p> <p>SEM ANTIBIÓTICOS SEM HERBICIDAS SEM FUNGICIDAS</p>	 <p>SEM ORO DE PASTO NATURAL SEM ANTIBIÓTICOS</p> <p>SEM ORO DE PASTO NATURAL SEM ANTIBIÓTICOS</p>
			

>300 Food Products



A photograph of a sunlit forest with large, mature trees and a grassy field. The sun is low in the sky, creating a warm, golden glow and long shadows. The trees have thick, gnarled trunks and dense green foliage. The ground is covered in dry grass and fallen leaves.

Today

Social Economy
Eco-Tecnologic Experiences
Social Experiences

Albert Howard
Masanobu Fukuoka
Viktor schaberger
Rudolf Stiener
Bill Molison
David Holmgren
Ana Maria Primavesi
Miguel Alteiri
Yeomans
Allan Savory
Gilles Lemieux
Paco Casero
Paul Stamets
Ernst Gotsch





An aerial photograph of a terraced agricultural landscape. The terrain is characterized by numerous concentric, wavy terraces that create a complex, organic pattern of green fields and light-colored soil. A multi-lane highway runs diagonally across the right side of the image. In the center, there is a rectangular area with a different texture, possibly a field of trees or a different crop. The overall scene depicts a sophisticated agricultural design that integrates natural topography with human-made infrastructure.

Eco-Tecologic:

Diversification

Micoorganisms

water Retention Landscape

Holistic Management

Succecion Dinamic Agroforestry





Acorn Food



Social:

Useres Cooperative Freixo do Meio
Intergral Cooperative

CSA Program Sharing the Harvest
130 families

Sociocracy

Users Cooperative

Consumers
Co-producers

Farm Workers

Owner
Neighbor ...



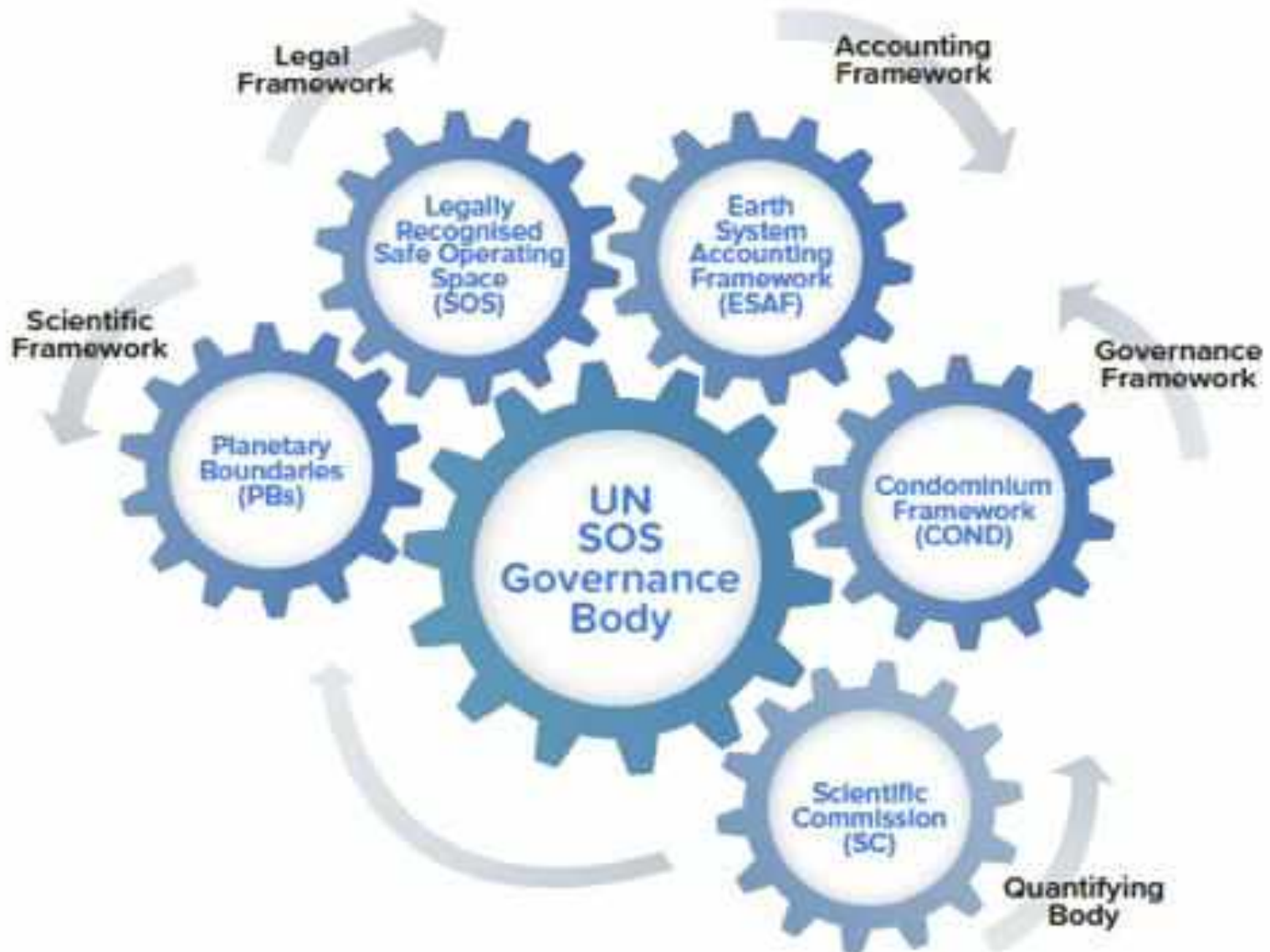
FOOD


Projects

Common Home of Humanity

A blueprint for global
governance

*What if we thought
of the Earth as an immense
condominium?*



A person stands on a sandy beach, looking up at the Earth from space. The Earth is a large, curved blue and white sphere dominating the upper half of the frame. The person is a small silhouette in the center of the lower half, with a shadow cast on the sand. The background is a dark, starry space.

PLAN OF LIFE

TANK YOU